

35 and shifts the contact 33 in engagement with the contact 30. This closing movement is hastened by the upward movement of the spring 36 which for the instant is released and tends by its inherent tension to move upwardly. The position of the parts when engagement between the contacts takes place is shown in Fig. 6.

Immediately after the contacts engage each other,—that is to say, immediately after the predetermined dwell or period of engagement, the length of which depends upon the distance between the shoulders 38<sup>a</sup> and 38<sup>b</sup> and the relative strengths of the springs 36 and 39, the contacts are quickly separated due to the fact that the upper shoulder 38<sup>a</sup> engages the upper surface of the spring 36 whereupon the two parts again become rigid or as one element and both are pressed downward by the spring 39 until the outer portion of the pivoted member 34 engages the stop pin 40. The parts are then again in the position shown in Fig. 7. It will be noted that in opening the two springs oppose each other, thus permitting a period of dwell which is long compared to the time of actual closing and actual opening.

With this construction as with the first, the closing and opening movements of the circuit breaker are extremely rapid, the opening following immediately after the dwell or period of engagement and being independent of the cam, so that the contacts can not be held closed by the cam. Additionally, as with the first construction, the period of engagement of the contacts is of ample length to get good results and is entirely independent of the speed of operation.

As in the first construction, the shaft 10 which operates the circuit breaker may be employed for operating the movable element of the distributor, the circuit breaker and distributor being shown in Fig. 8, associated and constituting one unitary structure.

In the construction just described the cam 11 is driven from the shaft 10 through the medium of the ratchet clutch with which the spiral spring 27 may be associated for the same purpose as previously described.

Numerous changes may be made in the constructions described without materially affecting the operation of my invention, and I, therefore, do not desire to be confined to the exact details shown, but aim in my claims to cover all modifications which do not involve a departure from the spirit and scope of my invention in its broadest aspects.

Having thus described my invention, what I claim is:—

1. In a circuit breaker, a pair of relatively movable contacts including a movable contact and a movable member carrying the

same, a movable support for said member, a cam controlling the contact carrying member, and means whereby when said member is released by the cam, said member is moved in one direction relative to said support causing the closing of the circuit and then said member and the support are moved in unison in the opposite direction causing the opening of the circuit.

2. In a circuit breaker, a pair of relatively movable contacts including a stationary contact and a movable contact, a movable member carrying the latter, a movable support for said member, a cam controlling the contact carrying member, and means whereby when said member is released by the cam, said member is moved relative to said support causing the closing of the circuit and then said member and the support are moved in unison causing the opening of the circuit, said means comprising a spring acting on said member.

3. In a circuit breaker, a pair of relatively movable contacts including a movable contact and a member carrying the same; a movable support to which said contact carrying member is pivoted; a cam controlling said contact carrying member and means acting upon the release of said member by the cam for rocking in one direction said member on the support to cause the closure of the circuit, and for subsequently shifting both said member and its support in unison in the opposite direction to cause the opening of the circuit.

4. In a circuit breaker, a pair of relatively movable contacts including a stationary contact and a movable contact, means for supporting said movable contact comprising a member moving about two axes; a cam adapted to engage and then release said member, and means acting on said member and operative upon said release by the cam to move said member about one axis to cause the closure of the circuit, and about a different axis to cause the opening of the circuit.

5. In a circuit breaker, a pair of relatively movable contacts including a movable contact and two movable supporting members therefor, one pivoted on the other, a cam for controlling said supporting members, and a spring acting on one of said members and serving when said member is released by the cam to rock said pivoted member a predetermined amount about its axis of connection with the other to cause the closure of the circuit and then to move both members to cause the opening of the circuit.

6. In a circuit breaker, a rotary contact controlling cam, a movable and a stationary contact; two members supporting the movable contact, one pivoted on the other, and a spring supported independently of both members and acting on the pivoted member, said spring serving when the cam